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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/888,890 | 06/25/2001 | Patrick A. Harkin | 4586US (00-0747) | 1176 |

24247 7590 02/04/2004

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| EXAMINER |
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CASCHERA, ANTONIO A

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| ART UNIT | PAPER NUMBER |
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2676

DATE MAILED: 02/04/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/888,890

Applicant(s)

HARKIN, PATRICK A.

Examiner

Antonio A Caschera

Art Unit

2676

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 16 January 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.


The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____

Claim(s) objected to: 39,48,56,58 and 67.Claim(s) rejected: 1-38,40-47,49-55,57,59-66 and 68.

Claim(s) withdrawn from consideration: _____

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
10. ☐ Other: _____



MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

Continuation of 5. does NOT place the application in condition for allowance because: The applicant argues Takeda lacks any teaching or suggestion of culling back facing polygons however Landau does. Landau et al. discloses implementing back-face culling by computing an area of a triangle by the cross-product of the x and y projections of the triangle sides (see columns 5-6, lines 67-3). Further, the applicant repeatedly argues, in reference to the independent claims, that neither Takeda et al., Landau et al. nor, Baltaretu et al. explicitly disclose sorting the data of the at least three vertices of a polygon prior to determining the cross product term or determining the orientation of the polygon based on the sorted data (see one instance, page 16, 2nd paragraph of applicants remarks). The office interprets all data input into a calculation sorted or arranged in some way. Some order must be followed in utilizing the data for performing calculations. The independent claims do not explicitly disclose the rearrangement of already ordered data input into the system therefore the office interprets the data input in the system, to be processed in some manner, already in a certain order as called upon by the system. The data utilized in the vector product and cross product calculations of Takeda et al. and Landau et al., respectively, is therefore sorted, as interpreted by the office. Applicant also argues there is no reason to combine any of the references of record however, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, both Takeda et al. and Landau et al. disclose systems directed towards producing three-dimensional objects from polygon data which determine data hidden from a viewable point (see abstracts of Takeda et al. and Landau et al.). Similarly, both references deal with backface culling and calculating some type of product to determine polygon orientation (see column 8, lines 46-64 of Takeda et al. and columns 5-6, lines 67-17 of Landau et al.). Therefore, the office interprets the motivation to combine the polygon data processing techniques used in Takeda et al. with the back-face culling system of Landau et al. in order to implement a system utilizing the above techniques to render only front-face polygons, rather than those which are hidden from view, reducing the amount of computation processing necessary for image synthesis (see column 2, lines 2-8 of Takeda et al.) thus improving processing efficiency and conserving system costs. The motivation to further combine Baltaretu et al. with the above references is directed towards the sorting of vertex data. Baltaretu et al. discloses eliminating the need to check tiles that are to the left of the left most vertex and the right of the right most vertex by sorting (see column 10, lines 1-5) which again, leads to the reduced amount of computation processing necessary for image synthesis thus improving processing efficiency and conserving system costs..